

**alpha-SIALON FLUORESCENT SUBSTANCE**

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**Abstract of JP2004067837**

**PROBLEM TO BE SOLVED:** To provide a crystalline, [alpha]-sialon fluorescent substance efficiently emitting fluorescence which is excited by blue light, is complementary color to blue and shows a high emission intensity and an excellent color rendering property.

**SOLUTION:** The [alpha]-sialon fluorescent substance employs an [alpha]-sialon of the formula:

$M<SB>x</SB>Si<SB>12-(m+n)</SB>Al<SB>(m+n)</SB>O<SB>n</SB>N<SB>16-n</SB>$  (wherein M is at least one metal element chosen from Li, Mg, Ca, Y and rare-earth elements other than La and Ce;  $x=m/[\delta]$ , provided that  $[\delta]$  is an average valence of the metal element M;  $0.15 \leq x \leq 1.5$ ; and  $1.8 \leq m/n \leq 2.2$ ) as a parent material. Here, the metal element M dissolved in the [alpha]-sialon is partially replaced with Eu while maintaining a neutral charge.

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